

CLAIMS

What is claimed is:

1. An identity (ID) recognition and locating system for determining the identity and position of a person in three-dimensional space, the system comprising:

5 an ID unit, which stores an ID code;

 at least three ID processing units, which receive the ID code and, after receiving the ID code, compute the distances from the ID unit to the ID processing units, respectively; and

10 a server, which computes the coordinate of the ID unit in the three-dimensional space according to the distances from the ID unit to the ID processing units.

2. The system of claim 1, wherein the ID unit further comprises:

 a storage unit, which stores the ID code; and

 a sending unit, which sends the ID code.

3. The system of claim 1, wherein ID processing unit comprises:

15 a receiving unit, which receives the ID code;

 a computing unit, which computes the distance between the ID unit and the ID processing unit according to the ID code; and

 a sending unit, which sends the ID code and the distance between the ID unit and the ID processing unit to the server.

20 4. The system of claim 1, wherein the ID processing unit estimates a delay time after receiving the ID code.

5. The system of claim 4, wherein the delay time is used to compute the distance from the ID unit to the ID processing unit.
6. The system of claim 5, wherein the distance from the ID unit to the ID processing unit is computed by multiplying the delay time of the ID code with the speed of radio waves.
7. The system of claim 1, wherein the ID unit is held by each of the customer and service representatives.
8. The system of claim 7, wherein after computing the three-dimensional coordinates of the ID units the server further sends a service representative the customer ID codes and coordinates of those who are in his/her service area.
9. The system of claim 7, wherein the customer ID codes of the customers in the service area of a service representative are displayed on a hand-held electronic device.
10. The system of claim 7, wherein the customer ID codes of the customers in the service area of a service representative are displayed on a wearing electronic device.
11. The system of claim 7, wherein the service representative uses the received customer ID code to look up information related to a customer from a customer information database via the server.
12. An ID recognition and locating method for determining the identity and position of a person in three-dimensional space, the method comprising the steps of:
- using an ID processing unit to receive an ID code;
 - estimating a delay time according to the received ID code;
 - using the ID processing unit to compute the distance from the ID code to the ID processing unit using the delay time; and

using a server to compute the position of the ID code in the three-dimensional space.

13. The method of claim 12, wherein the distance is transmitted to the server in a wireless method.

5 14. The method of claim 12, wherein the distance is computed by multiplying the delay time with the speed of radio waves.

15. The method of claim 12, wherein the IC code is sent from an ID unit.

16. The method of claim 15, wherein the ID unit is held by each of the customers and service representatives.